Question

Chris just got a job typing term papers. He charges $20 plus $2 per page.

Give an equation that represents the amount he charges in terms of the number of pages.

Find the amount he charges for a 10 page paper.

Use mathematics to justify your answer.

Analysis

To solve this problem I must determine an equation that will represent the amount Chris charges in terms of the number of pages. Then I must substitute 10 in for the number of pages.

Representation

C = the total charge for the term paper

N = the number of pages

C = 20 + 2N

Application

C = 20 + 2 (10)
C = 20 + 20
C = 40

The cost of a 10 page term paper is $40.

Explanation and Justification

40 = 20 + 2 (10)
40 = 20 + 20
40 =40
Forty dollars is correct because when it is substituted into the equation it makes a true statement.

Question

The state police have issued speeding tickets on a certain road. The amount of the fine is based on the speed over the limit. The relationship of the fine to the speed is a linear relationship as illustrated in the table below.

Speed	Fine
40 mph	$ 50
45 mph	$100
50 mph	$150

Use a graph or equation to determine the speed limit on this road.
Use mathematics to explain how you determined the speed limit.
Use words, symbols or both in your explanation.

Analysis

Representation

Application

Explanation and Justification

Question

Jumping up a muddy hill, a frog covers 10 inches per jump, but slides back 3 inches between hops. The top of the hill is 96 inches away.

How many jumps will it take the frog to arrive at the top of the hill?

Use mathematics to explain how you determined the number of jumps. Use words, symbols or both in your explanation.

Analysis

Representation

Application

Explanation and Justification

Question

Sarah has $135 in her savings account. Tracy has $150 in her savings account. Each week Sarah saves $8 and Tracy saves $5. This gives Sarah a total of $143 and Tracy a total of $155 at the end of week one. After how many weeks will they each have the same amount of money?

Use mathematics to explain how you determined the number of weeks. Use words, symbols or both in your explanation.

Analysis

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Explanation and Justification

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Analysis

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Application

Explanation and Justification